

LAND APPLICATION OF BIOSOLIDS  
JOHN FORD

MA 16 (FIELDS 1-23)  
MADISON COUNTY, VIRGINIA  
OCTOBER 2015

Event	Date	Initials
Code:		
Scanned	12/21	
QC		

revised +  
rescanned  
4/12/16

52



October 10, 2015

Mr. Edward Stuart  
Department of Environmental Quality  
Northern Virginia Regional Office  
13901 Crown Court  
Woodbridge, VA 22193

Dear Mr. Stuart:

Transmitted herein for your consideration is land application site for John Ford (designated as MA 16, fields 1-23), located in Madison County, Virginia. This submission contains strictly site specific information. Please refer to the operations and maintenance manual submitted under separate cover for all non-site specific information.

Do not hesitate to contact me at (804) 443-2170 should you have any questions or require additional information.

Sincerely,

A handwritten signature in blue ink that reads "Cmwhiteside".

Carolanne M. Whiteside  
Technical Services Coordinator

# SYNAGRO

## FIELD SUMMARY SHEET

John Ford

MA16

SYNAGRO FIELD #	GROSS ACRES	NET ACRES	FSA TRACT #	FIELD TYPE	OWNER
16-01	7.9	7.9		Agriculture	Guy E Clatterbuck Jr, Tr.
16-02	6.9	6.9		Agriculture	Guy E Clatterbuck Jr, Tr.
16-03	34.5	34.5		Agriculture	Guy E Clatterbuck Jr, Tr. & Anthony M or Linda G Clatterbuck
16-04	12.5	12.5		Agriculture	Guy E Clatterbuck Jr, Tr. & Anthony M or Linda G Clatterbuck
16-05	53.6	53.6		Agriculture	Guy E Clatterbuck Jr, Tr. & Anthony M or Linda G Clatterbuck
16-06	12.1	12.1		Agriculture	Guy E Clatterbuck Jr, Tr.
16-07	7.5	7.5		Agriculture	Guy E Clatterbuck Jr, Tr.
16-08	5.6	5.6		Agriculture	Guy E Clatterbuck Jr, Tr. & Anthony M or Linda G Clatterbuck
16-09	13.3	13.3		Agriculture	Guy E Clatterbuck Jr, Tr. & Anthony M or Linda G Clatterbuck
16-10	7.9	7.9		Agriculture	Guy E Clatterbuck Jr, Tr. & Anthony M or Linda G Clatterbuck
16-11	5.7	5.7		Agriculture	Guy E Clatterbuck Jr, Tr. & Anthony M or Linda G Clatterbuck
16-12	7.8	7.8		Agriculture	Guy E Clatterbuck Jr, Tr. & Anthony M or Linda G Clatterbuck
16-13	3.5	3.5		Agriculture	Thomas C or Dawn E Miller
16-14	29.8	29.8		Agriculture	Thomas C or Dawn E Miller
16-15	11.1	11.1		Agriculture	Thomas C or Dawn E Miller
16-16	6.6	6.6		Agriculture	Thomas C or Dawn E Miller
16-17	4.7	4.7		Agriculture	Thomas C or Dawn E Miller
16-18	12.0	12.0		Agriculture	Guy E Clatterbuck Jr, Tr.
16-19	10.3	10.3		Agriculture	Guy E Clatterbuck Jr, Tr.
16-20	12.9	12.9		Agriculture	Guy E Clatterbuck Jr, Tr.
16-21	8.8	8.8		Agriculture	Guy E Clatterbuck Jr, Tr.
16-22	11.5	11.5		Agriculture	Guy E Clatterbuck Jr, Tr.
16-23	9.0	9.0		Agriculture	Guy E Clatterbuck Jr, Tr.
<b>TOTALS:</b>	<b>295.5</b>	<b>295.5</b>			

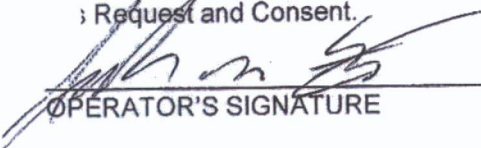


# SYNAGRO

## VIRGINIA REQUEST AND CONSENT FOR BIOSOLIDS

FARM OPERATOR: John Ford PHONE: (540) 718-9523  
ADDRESS: 7439 N. Seminole Trail Leon, VA 22725  
FARM LOCATION: Meander Run Rd., Ford Rd., + Leon Rd., Madison County  
FSA TRACT #: \_\_\_\_\_  
TOTAL ACRES: 312 COUNTY: Madison  
CROPS: grassland

1. I agree to be responsible for adhering to the following conditions, where applicable:
  - a. The soil pH will be adjusted  $\geq 6.0$  when biosolids are applied. (This may be accomplished through the application of lime-treated biosolids).
  - b. Do not graze animals on the land for 30 days after the application of biosolids. In addition, animals intended for dairy production should not be allowed to graze on the land or be fed chopped foliage for 60 days after the application of biosolids. Meat-producing livestock should not be fed chopped foliage for 30 days after the application of biosolids.
  - c. Food crops for direct human consumption with harvested parts below the surface of the land shall not be harvested for 14 months after the application of biosolids.
  - d. Food crops for direct human consumption with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface  $\geq 4$  months prior to incorporation into the soil or 38 months when the biosolids remain on the land surface  $< 4$  months prior to incorporation.
  - e. Food crops, feed crops and fiber crops shall not be harvested for 30 days after application of biosolids.
  - f. Public access to land with a low potential for public exposure (land the public uses infrequently including but not limited to agricultural land and forests) shall be restricted for 30 days after application of biosolids. Public access to land with a high potential for public exposure (land the public uses frequently including but not limited to a public contact site such as parks, playgrounds and golf courses) shall be restricted for 1 year. No biosolids-amended soil shall be excavated or removed from the site for 30 days following the biosolids application unless adequate provisions are made to prevent public exposure to soils, dusts or aerosols.
  - g. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority.
  - h. Supplemental commercial fertilizer or manure applications should be coordinated with the biosolids applications such that the total crop needs for nutrients are not exceeded as identified on the nutrient balance sheet or the nutrient management plan approved by the Virginia Department of Conservation and Recreation to be supplied to the farm operator by Synagro at the time of application of biosolids to a specific permitted site.
  - i. Tobacco, because it has been shown to accumulate cadmium, should not be grown for three years following the application of biosolids-borne cadmium equal to or exceeding 0.45 lbs/acre.
2. I understand that this transaction is not contemplated by the parties to be a sale of goods, and that Synagro is willing to provide to me without charge the service of land applying biosolids which have been approved by the appropriate regulatory agencies for land application.
3. I understand that successful crop production depends on many variables, such as weather, soil conditions and specific farming practices and that while Synagro has experience with land application of biosolids, the responsibility for properly accommodating agricultural practices to biosolids utilization are solely mine. I have also read and understand the "Important Information About Using Biosolids as a Fertilizer" which is on the reverse side and incorporated by reference in Request and Consent.

  
OPERATOR'S SIGNATURE

9-23-15  
DATE

Synagro \* 10647 Tidewater Trail \* Champlain, VA 22438 \* 804.443.2170



# IMPORTANT INFORMATION ABOUT USING BIOSOLIDS AS A FERTILIZER

## Biosolids Generation

Biosolids are the accumulated, treated solids separated from water during the treatment of wastewater by public and private wastewater treatment plants (Generators). The Generator is responsible for supplying biosolids that are suitable for land application under state and federal regulations.

## Benefits of Biosolids

Biosolids provide nitrogen in a form that can be taken up by plants during their growth cycle. Biosolids also add phosphorus to the soil. If lime is added to biosolids, the biosolids will have the added benefit of a liming agent. Biosolids contain primary, secondary and micronutrients that can be used by plants. Biosolids are primarily an organic material; when added to soil, they improve water and nutrient retention, reduce erosion potential and improve soil structure.

## The Permitting Process

Once the farm operator requests biosolids, a Synagro representative initially evaluates the farm for truck access and field conditions. If the farm is found to be suitable and the Request for Biosolids and the Consent for Biosolids forms are signed, Synagro will collect soil samples and have them analyzed by an independent laboratory.

Synagro will then apply for any federal, state or local permits required for biosolids application. The permits will specifically identify the fields to which biosolids will be applied and will be issued to Synagro or the Generator.

After the permits are obtained (a process that may take several months or more) Synagro will apply biosolids, as they become available, to the fields. Availability of biosolids may vary because of weather conditions, contractual arrangements with biosolids generators and other factors. Although the company cannot guarantee biosolids application because of factors beyond its control, Synagro will use its best efforts to apply biosolids to the permitted fields.

The conditions outlined in the permit will apply to any and all biosolids applications made by Synagro. Synagro will not be responsible for biosolids application made by any other entity.

Periodic visits to the land application site(s) by federal, state and local regulatory staff and Synagro representatives may occur for the purpose of permitting the site, inspecting the site, applying biosolids, obtaining samples at the site and testing. Proper identification will be provided upon request.

## Agronomic Considerations

Tractor-trailer units are used to deliver biosolids to the fields approved for biosolids applications. Soil compaction may occur on the travel areas used by the trucks and in areas where biosolids are unloaded for transfer to the applicator vehicle.

Since some biosolids contain lime, it is important to recognize any increase in soil pH where biosolids have been applied and exercise care in using certain herbicides. If considering the use of a sulfonylurea herbicide, particular attention should be paid to any label restrictions. High soil pH and dry weather may slow decomposition of these chemicals, resulting in carryover. For soils with low manganese levels, increased soil pH from lime addition (alone or in lime treated biosolids) may reduce manganese availability and thereby potentially reduce crop yields.

In planning a herbicide program, it should be noted that seeds may sometimes survive the biosolids treatment process -- for example, tomato seeds. Also, the organic matter additions from biosolids application (organic matter tends to tie up certain herbicides) may require increased herbicide application rates. Consult your extension agent or chemical representative for a specific recommendation.

Biosolids contain salts. Biosolids applications alone rarely cause salt problems. However, if combined with other significant salt-increasing factors, such as drought, excessive soil compaction, saline irrigation water and salt-containing fertilizers, salts may reach levels that could negatively affect germination and growth of some crops.

While odors from biosolids applications are not usually significant, and typically less than that from livestock manure, it is possible that an odor from the decomposition of organic matter may be noticed. If this occurs, it generally disappears in a short time.

Since biosolids provide nitrogen that will be released slowly throughout the growing season with diminishing carryover in subsequent years, it is important to reduce the use of nitrogen and other fertilizers to appropriate levels.



Rivermeade  
MA16

**VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION  
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

**PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS**

A. This land application agreement is made on 9-29-15 between Anthony M. Clatterbuck referred to here as "Landowner", and Synagro, referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or, with respect to those parcels that are retained by the Landowner in the event of a sale of one or more parcels, until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

**Landowner:**

The Landowner is the owner of record of the real property located in Madison, Virginia, which includes the agricultural, silvicultural or reclamation sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID
51-45C			

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☒ The Landowner is the sole owner of the properties identified herein.  
☐ The Landowner is one of multiple owners of the properties identified herein.

In the event that the Landowner sells or transfers all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, the Landowner shall:

1. Notify the purchaser or transferee of the applicable public access and crop management restrictions no later than the date of the property transfer; and
2. Notify the Permittee of the sale within two weeks following property transfer.

The Landowner has no other agreements for land application on the fields identified herein. The Landowner will notify the Permittee immediately if conditions change such that the fields are no longer available to the Permittee for application or any part of this agreement becomes invalid or the information herein contained becomes incorrect.

The Landowner hereby grants permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. The Landowner also grants permission for DEQ staff to conduct inspections on the land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance with regulatory requirements applicable to such application.

<u>Class B biosolids</u>	<u>Water treatment residuals</u>	<u>Food processing waste</u>	<u>Other industrial sludges</u>
X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No

2033 Meander Run Rd  
Locust Dale VA 22948

Linda Clatterbuck  
Landowner - Printed Name, Title

[Signature]  
Signature

Mailing Address

**Permittee:**

Synagro, the Permittee, agrees to apply biosolids and/or industrial residuals on the Landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia.

The Permittee agrees to notify the Landowner or the Landowner's designee of the proposed schedule for land application and specifically prior to any particular application to the Landowner's land. Notice shall include the source of residuals to be applied.

X I reviewed the document(s) assigning signatory authority to the person signing for landowner above. I will make a copy of this document(s) available to DEQ for review upon request. (Do not check this box if the landowner signs this agreement)

Lee C. Rosson  
Permittee - Authorized Representative  
Printed Name

Signature

10647 Tidewater Trail  
Champlain, VA 22438  
Mailing Address



Permittee: SynagroCounty or City: Madison

Landowner: \_\_\_\_\_

*Anthony M. Clatterbuck, Linda G. Clatterbuck*  
*Linda G. Clatterbuck*

**Landowner Site Management Requirements:**

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, until at least 30 days after land application at that site is completed.
2. Public Access
  - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
  - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
  - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by DEQ.
3. Crop Restrictions:
  - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
  - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
  - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
  - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
  - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy animals).
4. Livestock Access Restrictions:
 

Following biosolids application to pasture or hayland sites:

  - a. Meat producing livestock shall not be grazed for 30 days,
  - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
  - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

*Linda G. Clatterbuck*  
 Landowner's Signature

9-29-15  
 Date



**VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION  
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

**PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS**

A. This land application agreement is made on 9-29-15 between Anthony M. Clatterbuck referred to here as "Landowner", and Synagro, referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or, with respect to those parcels that are retained by the Landowner in the event of a sale of one or more parcels, until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

**Landowner:**

The Landowner is the owner of record of the real property located in Madison, Virginia, which includes the agricultural, silvicultural or reclamation sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID
51-45D			

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☐ The Landowner is the sole owner of the properties identified herein.  
☒ The Landowner is one of multiple owners of the properties identified herein.

In the event that the Landowner sells or transfers all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, the Landowner shall:

1. Notify the purchaser or transferee of the applicable public access and crop management restrictions no later than the date of the property transfer; and
2. Notify the Permittee of the sale within two weeks following property transfer.

The Landowner has no other agreements for land application on the fields identified herein. The Landowner will notify the Permittee immediately if conditions change such that the fields are no longer available to the Permittee for application or any part of this agreement becomes invalid or the information herein contained becomes incorrect.

The Landowner hereby grants permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. The Landowner also grants permission for DEQ staff to conduct inspections on the land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance with regulatory requirements applicable to such application.

Class B biosolids    Water treatment residuals    Food processing waste    Other industrial sludges  
X Yes    ☐ No    X Yes    ☐ No    X Yes    ☐ No    X Yes    ☐ No

2033 Meander Run Rd  
Locust Dale VA 22948

Linda Clatterbuck  
Landowner - Printed Name, Title  
Anthony M. Clatterbuck  
Permittee:

Synagro, the Permittee, agrees to apply biosolids and/or industrial residuals on the Landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with \$10.1-104.2 of the Code of Virginia.

The Permittee agrees to notify the Landowner or the Landowner's designee of the proposed schedule for land application and specifically prior to any particular application to the Landowner's land. Notice shall include the source of residuals to be applied.

X I reviewed the document(s) assigning signatory authority to the person signing for landowner above. I will make a copy of this document(s) available to DEQ for review upon request. (Do not check this box if the landowner signs this agreement)

Lee C. Rosson    for Lee Rosson    10647 Tidewater Trail  
Permittee - Authorized Representative    Signature    Champlain, VA 22438  
Printed Name    Mailing Address



MAIL

Permittee: Synagro

County or City: Madison

Landowner: \_\_\_\_\_

Anthony M. Clatterbuck, Linda G. Clatterbuck

**Landowner Site Management Requirements:**

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, until at least 30 days after land application at that site is completed.
2. Public Access
  - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
  - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
  - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by DEQ.
3. Crop Restrictions:
  - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
  - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
  - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
  - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
  - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy animals).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

  - a. Meat producing livestock shall not be grazed for 30 days,
  - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
  - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Anthony M. Clatterbuck  
Landowner's Signature

9-29-15  
Date



2915 Leon Rd, Culpeper  
VA 22701  
MA16

**VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION  
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

**PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS**

A. This land application agreement is made on 9/28/15 between Guy E. Clotterbuck, Jr referred to here as "Landowner", and Synagro, referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or, with respect to those parcels that are retained by the Landowner in the event of a sale of one or more parcels, until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

**Landowner:**

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Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID
	51-45D		

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

**Check one:**

- The Landowner is the sole owner of the properties identified herein.  
☒ The Landowner is one of multiple owners of the properties identified herein.

In the event that the Landowner sells or transfers all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, the Landowner shall:

1. Notify the purchaser or transferee of the applicable public access and crop management restrictions no later than the date of the property transfer; and
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<u>Class B biosolids</u>	<u>Water treatment residuals</u>	<u>Food processing waste</u>	<u>Other industrial sludges</u>
X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No
Guy Clotterbuck		2915 Leon Rd Culpeper VA 22701	

Landowner -- Printed Name, Title

Signature

Mailing Address

**Permittee:**

Synagro, the Permittee, agrees to apply biosolids and/or industrial residuals on the Landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia.

The Permittee agrees to notify the Landowner or the Landowner's designee of the proposed schedule for land application and specifically prior to any particular application to the Landowner's land. Notice shall include the source of residuals to be applied.

☒ I reviewed the document(s) assigning signatory authority to the person signing for landowner above. I will make a copy of this document(s) available to DEQ for review upon request. (Do not check this box if the landowner signs this agreement)

Lee C. Rosson

for Lee Rosson Jeff Clotterbuck

10647 Tidewater Trail  
Champlain, VA 22438

Permittee -- Authorized Representative  
Printed Name

Signature

Mailing Address



Permittee: SynagroCounty or City: MadisonLandowner: Guy E. Clatterbuck, Jr**Landowner Site Management Requirements:**

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

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  - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by DEQ.
3. Crop Restrictions:
  - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
  - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
  - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
  - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
  - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy animals).
4. Livestock Access Restrictions:
 

Following biosolids application to pasture or hayland sites:

  - a. Meat producing livestock shall not be grazed for 30 days,
  - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
  - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Guy E. Clatterbuck

Landowner's Signature

9/28/15

Date



2915 Leon Rd, Culpeper  
VA 22701  
MA16

**VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION  
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

**PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS**

A. This land application agreement is made on 9/28/15 between Guy E. Clatterback, Jr referred to here as "Landowner", and Synagro, referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or, with respect to those parcels that are retained by the Landowner in the event of a sale of one or more parcels, until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

**Landowner:**

The Landowner is the owner of record of the real property located in Madison, Virginia, which includes the agricultural, silvicultural or reclamation sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID
33-44	51-45 A		
33-44 E	51-45 E		
33-22			

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:



The Landowner is the sole owner of the properties identified herein.



The Landowner is one of multiple owners of the properties identified herein.

In the event that the Landowner sells or transfers all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, the Landowner shall:

1. Notify the purchaser or transferee of the applicable public access and crop management restrictions no later than the date of the property transfer; and
2. Notify the Permittee of the sale within two weeks following property transfer.

The Landowner has no other agreements for land application on the fields identified herein. The Landowner will notify the Permittee immediately if conditions change such that the fields are no longer available to the Permittee for application or any part of this agreement becomes invalid or the information herein contained becomes incorrect.

The Landowner hereby grants permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. The Landowner also grants permission for DEQ staff to conduct inspections on the land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance with regulatory requirements applicable to such application.

Class B biosolids      Water treatment residuals      Food processing waste      Other industrial sludges

X Yes    ☐ No    X Yes    ☐ No    X Yes    ☐ No    X Yes    ☐ No

Guy Clatterback

*[Signature]*

2915 Leon Rd Culpeper VA 22701

Landowner - Printed Name, Title

Signature

Mailing Address

**Permittee:**

Synagro, the Permittee, agrees to apply biosolids and/or industrial residuals on the Landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with \$10.1-104.2 of the Code of Virginia.

The Permittee agrees to notify the Landowner or the Landowner's designee of the proposed schedule for land application and specifically prior to any particular application to the Landowner's land. Notice shall include the source of residuals to be applied.

X I reviewed the document(s) assigning signatory authority to the person signing for landowner above. I will make a copy of this document(s) available to DEQ for review upon request. (Do not check this box if the landowner signs this agreement)

Lee C. Rosson

for Lee Rosson

*[Signature]*

10647 Tidewater Trail  
Champlain, VA 22438

Permittee - Authorized Representative  
Printed Name

Signature

Mailing Address



Permittee: Synagro County or City: Madison

Landowner: Guy E. Clatterbuck, Jr

**Landowner Site Management Requirements:**

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, until at least 30 days after land application at that site is completed.
2. Public Access
  - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
  - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
  - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by DEQ.
3. Crop Restrictions:
  - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
  - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
  - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
  - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
  - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy animals).
4. Livestock Access Restrictions:
 

Following biosolids application to pasture or hayland sites:

  - a. Meat producing livestock shall not be grazed for 30 days,
  - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
  - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Guy E. Clatterbuck  
Landowner's Signature

9/28/15  
Date



**VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION  
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

**PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS**

This land application agreement is made on 10-7-'15 between Thomas C or Dawn E Miller referred to here as "Landowner", and Synagro, referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or, with respect to those parcels that are retained by the Landowner in the event of a sale of one or more parcels, until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

**Landowner:**

The Landowner is the owner of record of the real property located in Madison Co Virginia, which includes the agricultural, silvicultural or reclamation sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID
42-23			

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☒ The Landowner is the sole owner of the properties identified herein.  
☐ The Landowner is one of multiple owners of the properties identified herein.

In the event that the Landowner sells or transfers all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, the Landowner shall:

1. Notify the purchaser or transferee of the applicable public access and crop management restrictions no later than the date of the property transfer; and
2. Notify the Permittee of the sale within two weeks following property transfer.

The Landowner has no other agreements for land application on the fields identified herein. The Landowner will notify the Permittee immediately if conditions change such that the fields are no longer available to the Permittee for application or any part of this agreement becomes invalid or the information herein contained becomes incorrect.

The Landowner hereby grants permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. The Landowner also grants permission for DEQ staff to conduct inspections on the land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance with regulatory requirements applicable to such application.

<u>Class B biosolids</u>	<u>Water treatment residuals</u>	<u>Food processing waste</u>	<u>Other industrial sludges</u>
X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No
<u>Thomas C. Miller</u> <u>Thomas C. Miller</u>			<u>General Delivery</u> <u>Oak Park, VA 22730</u>
Landowner - Printed Name, Title		Signature	Mailing Address

**Permittee:**

Synagro, the Permittee, agrees to apply biosolids and/or industrial residuals on the Landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia.

The Permittee agrees to notify the Landowner or the Landowner's designee of the proposed schedule for land application and specifically prior to any particular application to the Landowner's land. Notice shall include the source of residuals to be applied.

X I reviewed the document(s) assigning signatory authority to the person signing for landowner above. I will make a copy of this document(s) available to DEQ for review upon request. (Do not check this box if the landowner signs this agreement)

<u>Jeff Daw Hart</u>	<u>Jeff Daw Hart</u>	<u>10647 Tidewater Trail</u>
Permittee - Authorized Representative	Signature	Mailing Address
Printed Name		Champlain, VA 22438



REGINIA POLLUTION ABATEMENT PERMIT APPLICATION: PART D-VI LAND APPLICATION AGREEMENT

Permittee: Synagro County or City: Madison  
Landowner: Thomas C or Dawn E Miller

**Landowner Site Management Requirements:**

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

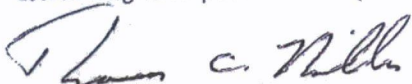
I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, until at least 30 days after land application at that site is completed.
2. Public Access
  - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
  - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
  - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by DEQ.
3. Crop Restrictions:
  - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
  - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
  - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
  - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
  - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy animals).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

  - a. Meat producing livestock shall not be grazed for 30 days,
  - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
  - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

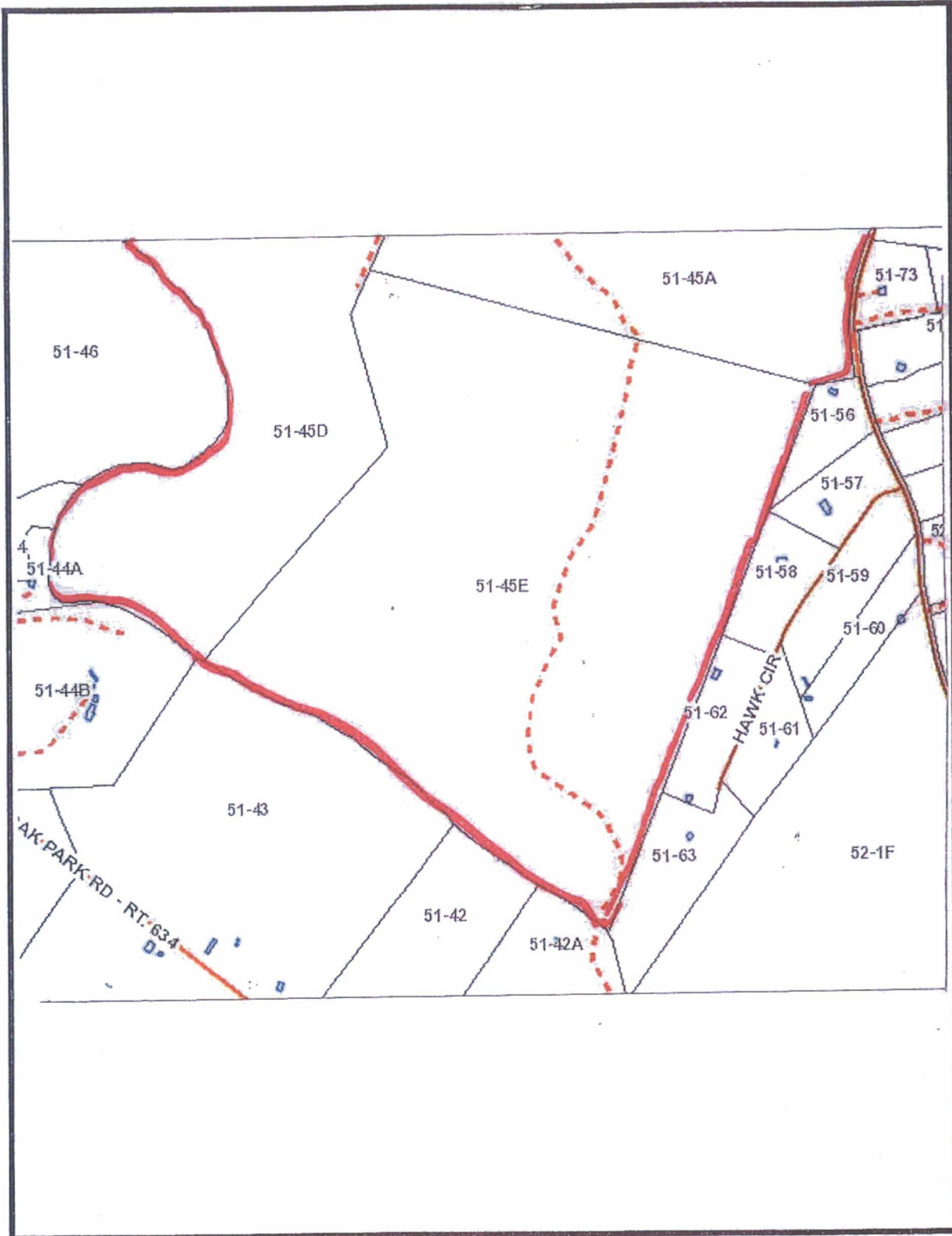


Landowner's Signature

10/7/15

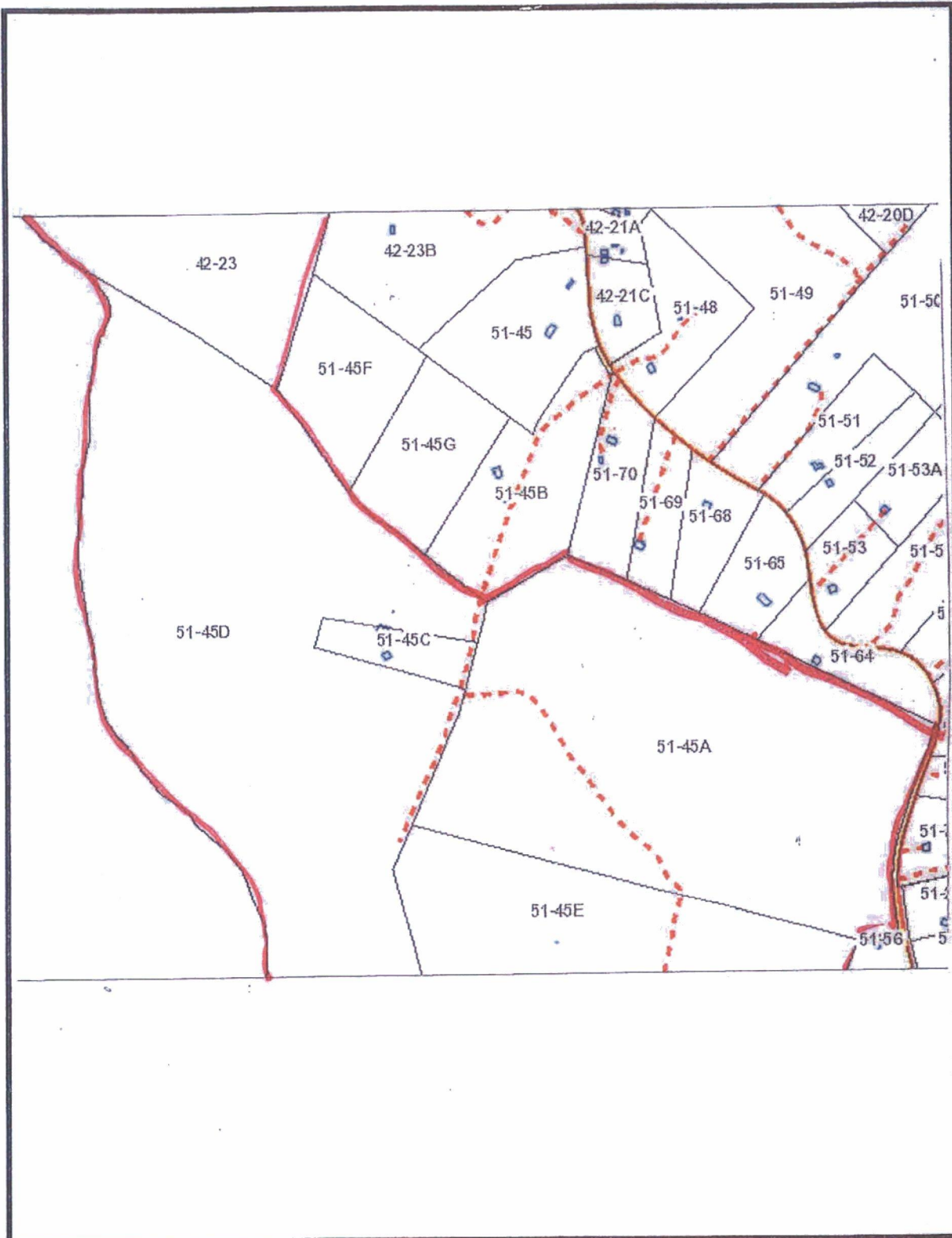
Date





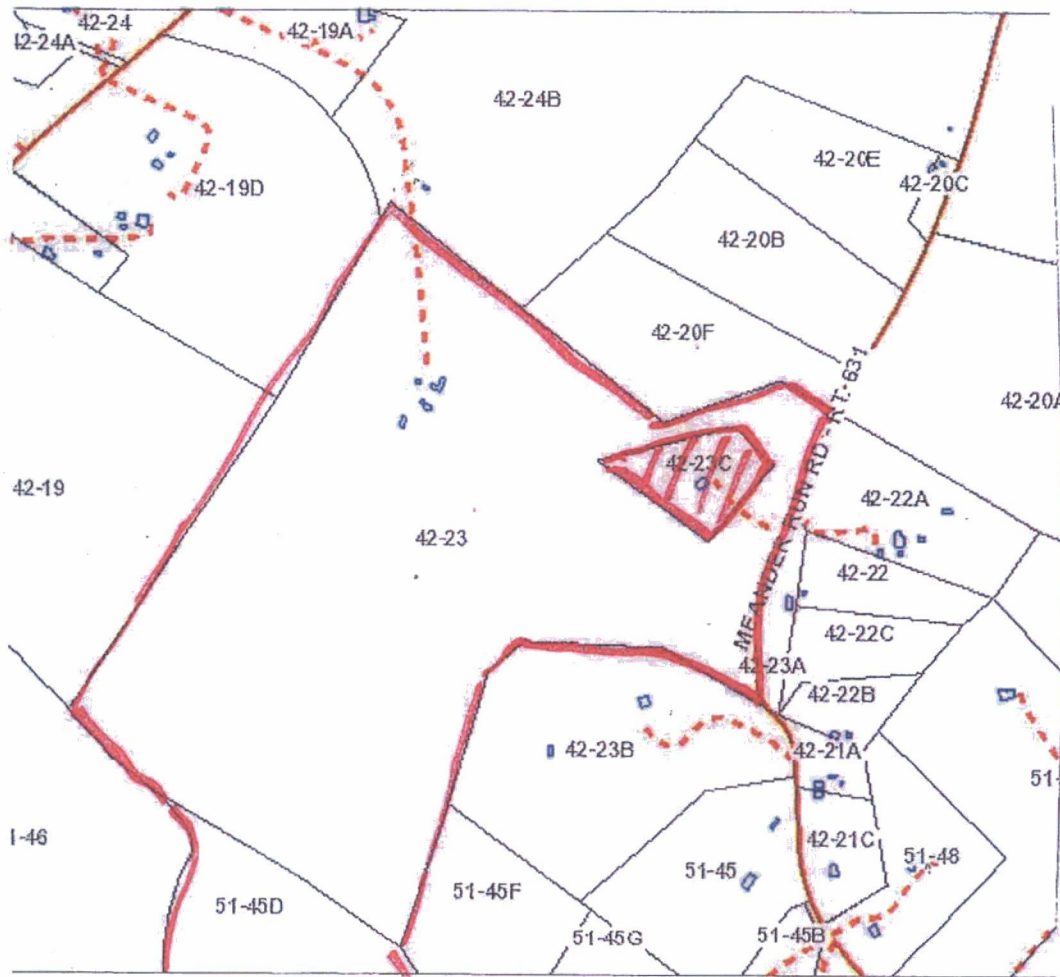
LOCATION MAP





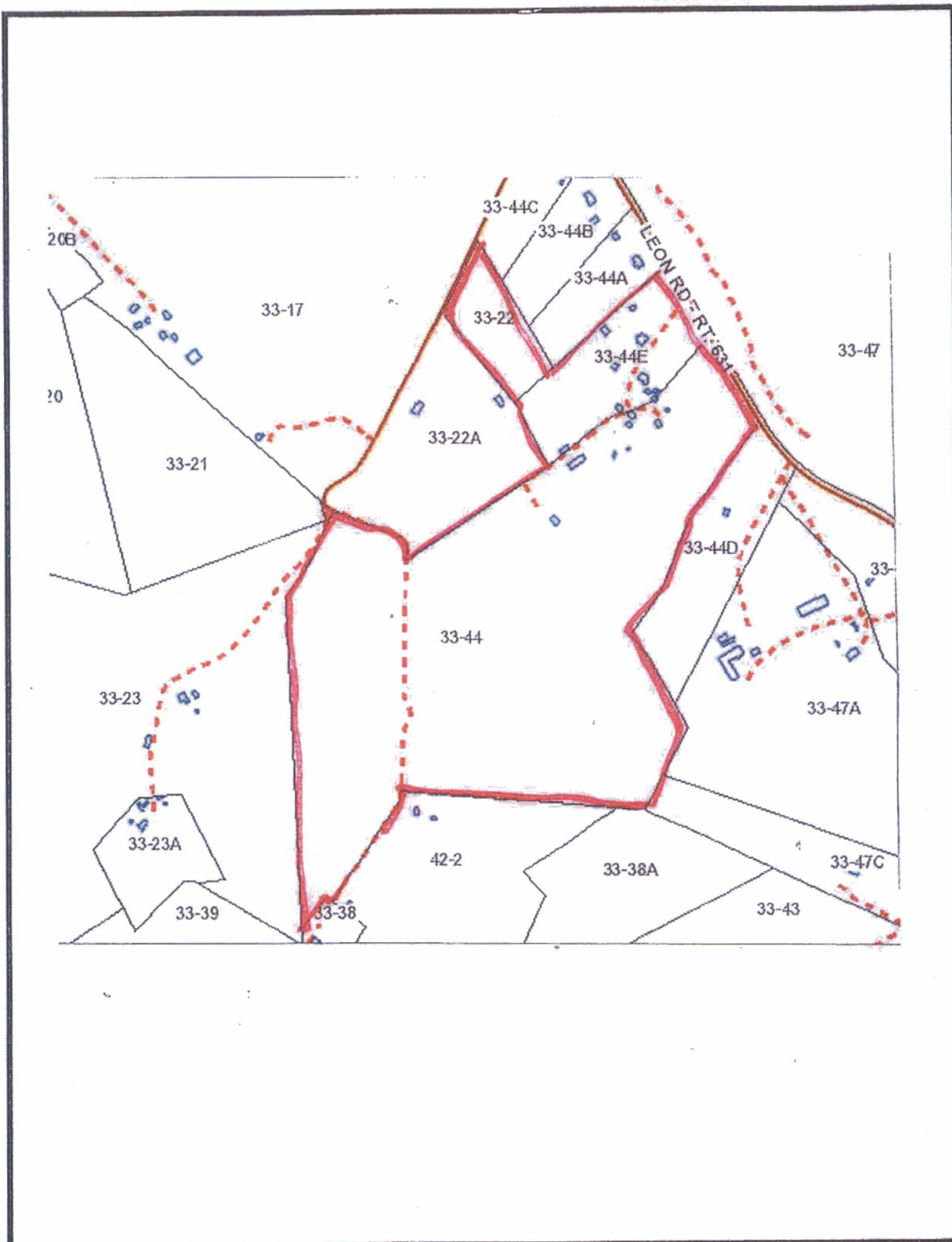
LOCATION MAP





LOCATION MAP





LOCATION MAP



# TAX ID LANDOWNER IDENTIFICATION SHEET

Landowner	Field Number	Tax ID
Guy E Clatterbuck Jr, Tr.	16-01	51-45E
Guy E Clatterbuck Jr, Tr.	16-02	51-45E
Guy E Clatterbuck Jr, Tr.	16-03	51-45E
Guy E Clatterbuck Jr, Tr. & Anthony M or Linda G Clatterbuck		51-45D
Guy E Clatterbuck Jr, Tr. & Anthony M or Linda G Clatterbuck	16-04	51-45D
Guy E Clatterbuck Jr, Tr.	16-05	51-45A; 51-45E
Guy E Clatterbuck Jr, Tr. & Anthony M or Linda G Clatterbuck		51-45D
Guy E Clatterbuck Jr, Tr.	16-06	51-45A
Guy E Clatterbuck Jr, Tr.	16-07	51-45A
Guy E Clatterbuck Jr, Tr. & Anthony M or Linda G Clatterbuck	16-08	51-45D
Anthony M or Linda G Clatterbuck		51-45C
Guy E Clatterbuck Jr, Tr. & Anthony M or Linda G Clatterbuck	16-09	51-45D
Anthony M or Linda G Clatterbuck		51-45C
Guy E Clatterbuck Jr, Tr. & Anthony M or Linda G Clatterbuck	16-10	51-45D
Guy E Clatterbuck Jr, Tr. & Anthony M or Linda G Clatterbuck	16-11	51-45D
Guy E Clatterbuck Jr, Tr. & Anthony M or Linda G Clatterbuck	16-12	51-45D
Thomas C or Dawn E Miller	16-13	42-23
Thomas C or Dawn E Miller	16-14	42-23
Thomas C or Dawn E Miller	16-15	42-23
Thomas C or Dawn E Miller	16-16	42-23
Thomas C or Dawn E Miller	16-17	42-23
Guy E Clatterbuck Jr, Tr.	16-18	33-44
Guy E Clatterbuck Jr, Tr.	16-19	33-44
Guy E Clatterbuck Jr, Tr.	16-20	33-44
Guy E Clatterbuck Jr, Tr.	16-21	33-44
Guy E Clatterbuck Jr, Tr.	16-22	33-44; 33-44E
Guy E Clatterbuck Jr, Tr.	16-23	33-22; 33-44E



Field Number	Latitude (North)	Longitude (West)
16-01	38.360°	78.132°
16-02	38.365°	78.129°
16-03	38.363°	78.135°
16-04	38.365°	78.137°
16-05	38.367°	78.133°
16-06	38.369°	78.131°
16-07	38.371°	78.132°
16-08	38.371°	78.135°
16-09	38.370°	78.135°
16-10	38.370°	78.139°
16-11	38.372°	78.140°
16-12	38.374°	78.139°
16-13	38.377°	78.141°
16-14	38.379°	78.138°
16-15	38.379°	78.134°
16-16	38.381°	78.1389°
16-17	38.382°	78.136°
16-18	38.427°	78.144°
16-19	38.421°	78.141°
16-20	38.428°	78.141°
16-21	38.429°	78.138°
16-22	38.431°	78.137°
16-23	38.431°	78.140°

#### Haul Route:

The Location maps in conjunction with the above latitude and longitude coordinates are a route planning tool meant to be a guide to indicate suggested haul routes for various preferences: to include but not limited to all federal, state, and local granted STAA access routes.



## Farm Summary Report

Plan: New Plan Fall, 2015 - Winter, 2016

Farm Name: MA 16

Field Name: 1  
Total Acres: 7.90 Usable Acres: 7.90  
FSA Number: 0  
Tract: C  
Location: Madison  
Slope Class: A Hydrologic Group: D

Riparian buffer width: 0 ft  
Distance to stream: 0 ft

### *P-Index Summary*

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

### **Soil Test Results:**

DATE	PH	P	K	Lab
[NO TEST]				

### **Soils:**

PERCENT	SYMBOL	SOIL SERIES
25	MvB	Meadowville
49	Cm	Chewacla
26	Cv	Congaree

### **Field Warnings:**

Field Name: 2  
Total Acres: 6.90 Usable Acres: 6.90  
FSA Number: 0  
Tract: A  
Location: Madison  
Slope Class: C Hydrologic Group: D

Riparian buffer width: 0 ft  
Distance to stream: 0 ft

### *P-Index Summary*

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

### **Soil Test Results:**

DATE	PH	P	K	Lab
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### **Soils:**

PERCENT	SYMBOL	SOIL SERIES
17	EIC	Elioak
64	LfC2	Lloyd
19	LfD2	Lloyd

### **Field Warnings:**



**Field Name:** 3  
Total Acres: 34.50 Usable Acres: 34.50  
FSA Number: 0  
Tract: A  
Location: Madison  
Slope Class: B Hydrologic Group: D

Riparian buffer width: 0 ft  
Distance to stream: 0 ft

*P-Index Summary*

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

**Soil Test Results:**

DATE	PH	P	K	Lab
	[NO TEST]			

**Soils:**

PERCENT	SYMBOL	SOIL SERIES
6	AIA	Altavista
23	Cm	Chewacla
6	Cv	Congaree
7	LfB	Lloyd
37	LfC2	Lloyd
7	MvB	Meadowville
12	SrC	Starr
2	UsD	Unison

**Field Warnings:**

**Field Name:** 4  
Total Acres: 12.50 Usable Acres: 12.50  
FSA Number: 0  
Tract: A  
Location: Madison  
Slope Class: C Hydrologic Group: D

Riparian buffer width: 0 ft  
Distance to stream: 0 ft

*P-Index Summary*

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

**Soil Test Results:**

DATE PH P K Lab  
[NO TEST]

**Soils:**

PERCENT	SYMBOL	SOIL SERIES
2	LIB2	Lloyd
72	LIC2	Lloyd
12	SrC	Starr
14	WaC	Watt

**Field Warnings:**

**Field Name:** 5  
Total Acres: 53.60 Usable Acres: 53.60  
FSA Number: 0  
Tract: A  
Location: Madison  
Slope Class: C Hydrologic Group: D

Riparian buffer width: 0 ft  
Distance to stream: 0 ft

*P-Index Summary*

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

**Soil Test Results:**

DATE PH P K Lab  
[NO TEST]

**Soils:**

PERCENT	SYMBOL	SOIL SERIES
9	LfB	Lloyd
33	LfC2	Lloyd
4	LIB2	Lloyd
24	LIC2	Lloyd
4	LnD3	Lloyd
22	MvB	Meadowville
4	SrC	Starr

**Field Warnings:**



**Field Name:** 6  
**Total Acres:** 12.10 **Usable Acres:** 12.10  
**FSA Number:** 0  
**Tract:** A  
**Location:** Madison  
**Slope Class:** C **Hydrologic Group:** D

Riparian buffer width: 0 ft  
Distance to stream: 0 ft

*P-Index Summary*

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

**Soil Test Results:**

DATE	PH	P	K	Lab
[NO TEST]				

**Soils:**

PERCENT	SYMBOL	SOIL SERIES
6	EIC	Elioak
68	EIC2	Elioak
26	MvB	Meadowville

**Field Warnings:**

**Field Name:** 7  
**Total Acres:** 7.50 **Usable Acres:** 7.50  
**FSA Number:** 0  
**Tract:** A  
**Location:** Madison  
**Slope Class:** C **Hydrologic Group:** D

Riparian buffer width: 0 ft  
Distance to stream: 0 ft

*P-Index Summary*

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

**Soil Test Results:**

DATE	PH	P	K	Lab
	[NO TEST]			

**Soils:**

PERCENT	SYMBOL	SOIL SERIES
2	EIC	Elioak
3	EIC2	Elioak
17	HaD	Hazel
7	LfD2	Lloyd
22	LIC2	Lloyd
11	LnD3	Lloyd
38	MvB	Meadowville

**Field Warnings:**

*Environmentally Sensitive Soils due to:*

*Shallow soils less than 41 inches deep likely to be located over fractured or limestone bedrock*

*Soils with percent slope in excess of 15%*



**Field Name:** 8  
**Total Acres:** 5.60    **Usable Acres:** 5.60  
**FSA Number:** 0  
**Tract:** A  
**Location:** Madison  
**Slope Class:** D    **Hydrologic Group:** D

Riparian buffer width: 0 ft  
Distance to stream: 0 ft

*P-Index Summary*

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

**Soil Test Results:**

DATE	PH	P	K	Lab
	[NO TEST]			

**Soils:**

PERCENT	SYMBOL	SOIL SERIES
26	EmC2	Elioak
2	HaD	Hazel
14	LIC2	Lloyd
25	WaC	Watt
21	WaE	Watt
12	ZoC	Zion

**Field Warnings:**

*Environmentally Sensitive Soils due to:*

*Shallow soils less than 41 inches deep likely to be located over fractured or limestone bedrock*

*Soils with percent slope in excess of 15%*

**Field Warnings:**



**Field Name:** 11  
**Total Acres:** 5.70 **Usable Acres:** 5.70  
**FSA Number:** 0  
**Tract:** A  
**Location:** Madison  
**Slope Class:** B **Hydrologic Group:** D

Riparian buffer width: 0 ft  
Distance to stream: 0 ft

*P-Index Summary*

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

**Soil Test Results:**

**DATE** **PH** **P** **K** **Lab**  
[NO TEST]

**Soils:**

PERCENT	SYMBOL	SOIL SERIES
47	Cv	Congaree
11	HaD	Hazel
33	LfC2	Lloyd
9	MvB	Meadowville

**Field Warnings:**

**Field Name:** 12  
**Total Acres:** 7.80 **Usable Acres:** 7.80  
**FSA Number:** 0  
**Tract:** A  
**Location:** Madison  
**Slope Class:** C **Hydrologic Group:** D

Riparian buffer width: 0 ft  
Distance to stream: 0 ft

*P-Index Summary*

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

**Soil Test Results:**

**DATE** **PH** **P** **K** **Lab**  
[NO TEST]

**Soils:**

PERCENT	SYMBOL	SOIL SERIES
3	HaC	Hazel
42	LfB	Lloyd
51	LfC2	Lloyd
4	HaD	Hazel

**Field Warnings:**

**Field Name:** 13  
Total Acres: 1.00 Usable Acres: 1.00  
FSA Number: 0  
Tract: B  
Location: Madison  
Slope Class: A Hydrologic Group: D

Riparian buffer width: 0 ft  
Distance to stream: 0 ft

*P-Index Summary*

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

**Soils:**

PERCENT	SYMBOL	SOIL SERIES
40	Bu	Buncombe
60	Cm	Chewacla

**Field Warnings:**

*Environmentally Sensitive Soils due to:*

*Soils with potential for leaching based on soil texture or excessive drainage*

**Field Name:** 14  
Total Acres: 29.80 Usable Acres: 29.80  
FSA Number: 0  
Tract: B  
Location: Madison  
Slope Class: C Hydrologic Group: D

Riparian buffer width: 0 ft  
Distance to stream: 0 ft

*P-Index Summary*

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

**Soil Test Results:**

DATE	PH	P	K	Lab
------	----	---	---	-----

**Soils:**

PERCENT	SYMBOL	SOIL SERIES
23	EIB2	Elioak
8	EnC3	Elioak
16	HaC	Hazel
2	HaD	Hazel
3	LfB	Lloyd
19	LfC2	Lloyd
13	MvB	Meadowville
7	RtE	Rock land
9	SrC	Starr

**Field Warnings:**

*Environmentally Sensitive Soils due to:*

*Shallow soils less than 41 inches deep likely to be located over fractured or limestone bedrock*

*Soils with parent slope in excess of 15%*



**Field Name:** 15  
**Total Acres:** 11.10 **Usable Acres:** 11.10  
**FSA Number:** 0  
**Tract:** B  
**Location:** Madison  
**Slope Class:** C **Hydrologic Group:** D

**Riparian buffer width:** 0 ft  
**Distance to stream:** 0 ft

*P-Index Summary*

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

**Soil Test Results:**

DATE	PH	P	K	Lab
------	----	---	---	-----

**Soils:**

PERCENT	SYMBOL	SOIL SERIES
22	CfB	Cecil
21	ChC2	Appling Cecil
18	EIC2	Elioak
27	HaD	Hazel
12	MvB	Meadowville

**Field Warnings:**

*Environmentally Sensitive Soils due to:*

*Shallow soils less than 41 inches deep likely to be located over fractured or limestone bedrock*

*Soils with perent slope in excess of 15%*

**Field Name:** 16  
Total Acres: 6.60 Usable Acres: 6.60  
FSA Number: 0  
Tract: B  
Location: Madison  
Slope Class: C Hydrologic Group: D

Riparian buffer width: 0 ft  
Distance to stream: 0 ft

*P-Index Summary*

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

**Soil Test Results:**

DATE	PH	P	K	Lab
	[NO TEST]			

**Soils:**

PERCENT	SYMBOL	SOIL SERIES
4	EIB	Elioak
48	EIC2	Elioak
10	HaD	Hazel
38	MvB	Meadowville

**Field Warnings:**

**Field Name:** 17  
Total Acres: 4.70 Usable Acres: 4.70  
FSA Number: 0  
Tract: B  
Location: Madison  
Slope Class: C Hydrologic Group: D

Riparian buffer width: 0 ft  
Distance to stream: 0 ft

*P-Index Summary*

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

**Soil Test Results:**

DATE	PH	P	K	Lab
	[NO TEST]			

**Soils:**

PERCENT	SYMBOL	SOIL SERIES
47	LfC2	Lloyd
53	MvB	Meadowville

**Field Warnings:**



**Field Name:** 18  
**Total Acres:** 12.00 **Usable Acres:** 12.00  
**FSA Number:** 0  
**Tract:** C  
**Location:** Madison  
**Slope Class:** D **Hydrologic Group:** D

**Riparian buffer width:** 0 ft  
**Distance to stream:** 0 ft

*P-Index Summary*

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

**Soil Test Results:**

DATE	PH	P	K	Lab
[NO TEST]				

**Soils:**

PERCENT	SYMBOL	SOIL SERIES
31	Cm	Chewacla
10	EmC2	Elioak
9	HaD	Hazel
1	LoC	Louisburg
21	LoD	Louisburg
28	We	Wehadkee

**Field Warnings:**

*Environmentally Sensitive Soils due to:*

*Soils with potential for leaching based on soil texture or excessive drainage*

*Shallow soils less than 41 inches deep likely to be located over fractured or limestone bedrock*

*Soils with perent slope in excess of 15%*

**Field Name:** 19  
**Total Acres:** 10.30 **Usable Acres:** 10.30  
**FSA Number:** 0  
**Tract:** C  
**Location:** Madison  
**Slope Class:** B **Hydrologic Group:** C

Riparian buffer width: 0 ft  
Distance to stream: 0 ft

*P-Index Summary*

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

**Soil Test Results:**

DATE	PH	P	K	Lab
	[NO TEST]			

**Soils:**

PERCENT	SYMBOL	SOIL SERIES
6	CeC2	Cecil
33	Cm	Chewacla
38	LoC	Louisburg
23	MvB	Meadowville

**Field Warnings:**

*Environmentally Sensitive Soils due to:*

*Soils with potential for leaching based on soil texture or excessive drainage*



**Field Name:** 20  
Total Acres: 12.90 Usable Acres: 12.90  
FSA Number: 0  
Tract: C  
Location: Madison  
Slope Class: C Hydrologic Group: B

Riparian buffer width: 0 ft  
Distance to stream: 0 ft

*P-Index Summary*

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

**Soil Test Results:**

DATE PH P K Lab  
[NO TEST]

**Soils:**

PERCENT	SYMBOL	SOIL SERIES
25	CeB2	Cecil
53	CeC2	Cecil
2	Cm	Chewacla
17	LoC	Louisburg
3	MvB	Meadowville

**Field Warnings:**

**Field Name:** 21  
Total Acres: 8.80 Usable Acres: 8.80  
FSA Number: 0  
Tract: C  
Location: Madison  
Slope Class: C Hydrologic Group: B

Riparian buffer width: 0 ft  
Distance to stream: 0 ft

*P-Index Summary*

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

**Soil Test Results:**

DATE PH P K Lab  
[NO TEST]

**Soils:**

PERCENT	SYMBOL	SOIL SERIES
29	MvB	Meadowville
71	CeC2	Cecil

**Field Warnings:**

**Field Name: 22**

Total Acres: 11.50 Usable Acres: 11.50

FSA Number: 0

Tract: C

Location: Madison

Slope Class: C Hydrologic Group: B

Riparian buffer width: 0 ft

Distance to stream: 0 ft

**P-Index Summary**

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

**Soil Test Results:**

DATE	PH	P	K	Lab
	[NO TEST]			

**Soils:**

PERCENT	SYMBOL	SOIL SERIES
57	CeC2	Cecil
17	CeB	Cecil
26	MvB	Meadowville

**Field Warnings:****Field Name: 23**

Total Acres: 9.00 Usable Acres: 9.00

FSA Number: 0

Tract: C

Location: Madison

Slope Class: C Hydrologic Group: B

Riparian buffer width: 0 ft

Distance to stream: 0 ft

**P-Index Summary**

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

**Soil Test Results:**

DATE	PH	P	K	Lab
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**Soils:**

PERCENT	SYMBOL	SOIL SERIES
11	CeB	Cecil
52	CeC2	Cecil
4	LoC	Louisburg
33	LoD	Louisburg

**Field Warnings:***Environmentally Sensitive Soils due to:**Soils with potential for leaching based on soil texture or excessive drainage**Soils with percent slope in excess of 15%*



## ENVIRONMENTALLY SENSITIVE AREAS

Field	Reason for Sensitive Area
16-01	High Water Table (Map Unit Cm - 49%) Frequent Flooding Map Units Cm & Cv - 75%)
16-02	None
16-03	High Water Table (Map Unit Cm - 23%) Frequent Flooding Map Units Cm & Cv - 29%)
16-04	None
16-05	None
16-06	None
16-07	Shallow Soils (Map Unit HaD - 17%) Excessive Slope (Map Unit HaD - 17%)
16-08	Shallow Soils (Map Units HaD, WaC, & WaE - 48%) Excessive Slope (Map Units HaD & WaE - 23%)
16-09	Shallow Soils (Map Units WaC, & WaE - 40%) Excessive Slope (Map Unit WaE - 25%)
16-10	Frequent Flooding Map Unit Cv - 40%)
16-11	Frequent Flooding Map Unit Cv - 47%) Excessive Slope (Map Unit HaD - 11%)
16-12	Shallow Soils (Map Units HAC & HaD -78%) Excessive Slope (Map Unit HaD - 4%)
16-13	Leaching (Map Unit Bu - 40%) High Water Table (Map Unit Cm - 60%) Frequent Flooding Map Unit Cm - 60%)
16-14	Shallow Soils (Map Units HAC & HaD -18%) Excessive Slope (Map Unit HaD - 2%)
16-15	Shallow Soils (Map Unit HaD -27%) Excessive Slope (Map Unit HaD - 27%)

## ENVIRONMENTALLY SENSITIVE AREAS

Field	Reason for Sensitive Area
16-17	None
16-18	Leaching (Map Units LoC & LoD - 22%) High Water Table (Map Units Cm & We - 59%) Frequent Flooding Map Units Cm & We - 59%) Shallow Soils (Map Units We & HaD -37%) Excessive Slope (Map Units HaD & LoD - 10%)
16-19	High Water Table (Map Unit Cm - 33%) Leaching (Map Unit LoC - 38%)
16-20	High Water Table (Map Unit Cm - 2%) Leaching (Map Unit LoC - 17%)
16-21	None
16-22	None
16-23	Leaching (Map Units LoC & LoD - 37%) Excessive Slope (Map Unit LoD - 33%)

## Madison County Soils that are Environmentally Sensitive

Soil Map Unit	Series Name	Time of year		Environmental
		High Water	Flooded	
Ab	Albano	Nov-May		
Ac, Ad	Alluvial	Nov-Ma	Nov-May	
Au	Augusta	Dec-May		
BaB	Baile	Nov-April		
BdC, BdD	Brandywine			Leaching
BeC, BeD, BeF	Brandywine			Leaching
BnD, BnF	Brandywine			Leaching
BrC, BrE	Bremo			Leaching
Bu	Buncombe		Feb-June	Leaching
CbB	Calverton	Dec-May		
CcC, CcE	Catoctin			Shallow
Cm	Chewacla	Nov-April	Nov-April	
Cn	Codorus	Nov-April	Nov-April	
CoC	Colfax	Nov-June		
Cv, Cw	Congaree		Nov-April	
Eb	Elbert	Nov-May		
HaC, HaD, HaF	Hazel			Shallow
IrB	Iredell	Dec-April		
LeD	Lewisberry			Leaching
LoC, LoD, LoF	Louisburg			Leaching
MoC	Manor			Leaching
Rh	Riverwash	Jan-Dec	Oct-July	
Rk	Roanoke	Nov-May		
TuB, TuC, TuD, Tue	Tusquitee			Leaching
WaC, WaE	Watt			Shallow
We	Wehadkee	Nov-May	Nov-May	
WmB	Worsham	Nov-April		



# Map Legend



House/Dwelling with a well

- 200' buffer-dwelling (with conditions for reduction);
- 100' buffer-well



Rock Outcrop

- 25' buffer



Limestone Outcrop / Closed Sinkholes

- 50' buffer



Well

- 100' buffer



Lake/Pond

- 35' w/vegetative buffer; 100' without vegetative buffer



Slope which exceeds 15%



"PAS" - Publicly Accessible Site

- 200' buffer



Intermittent Stream

- 35' w/vegetative buffer; 100' without vegetative buffer



Stream/River

- 35' w/vegetative buffer; 100' without vegetative buffer



Agricultural/Drainage Ditch

- 10' buffer



Field Boundary



Property Line

- 100' buffer unless waiver issued





# SYNAGRO

JOHN FORD  
MA 16  
Fields 1-10



## SOIL MAP

REVISED 11-6-2015



Environmentally Sensitive Areas







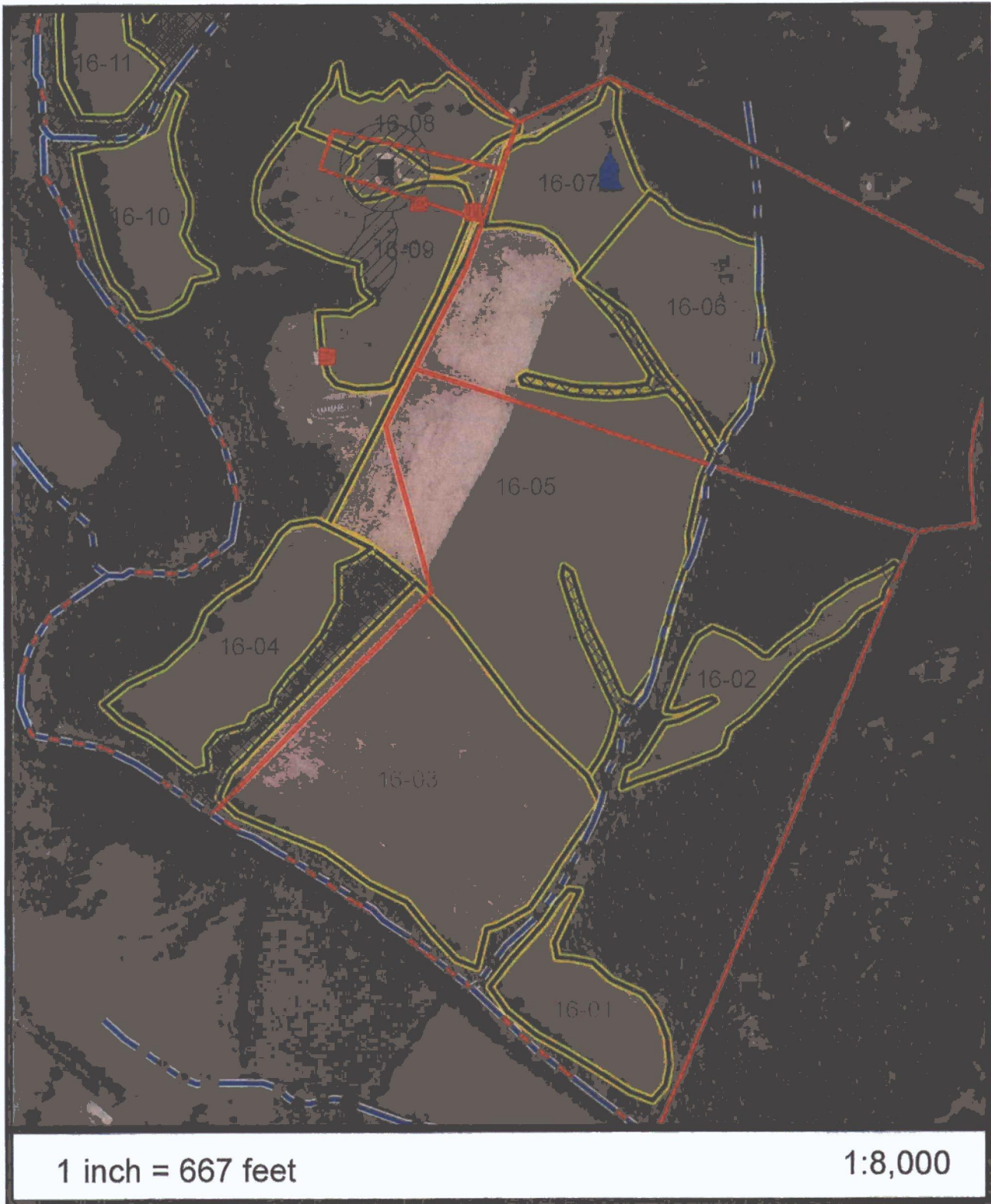






# SYNAGRO

JOHN FORD  
MA 16  
Fields 1-10



**AERIAL MAP**

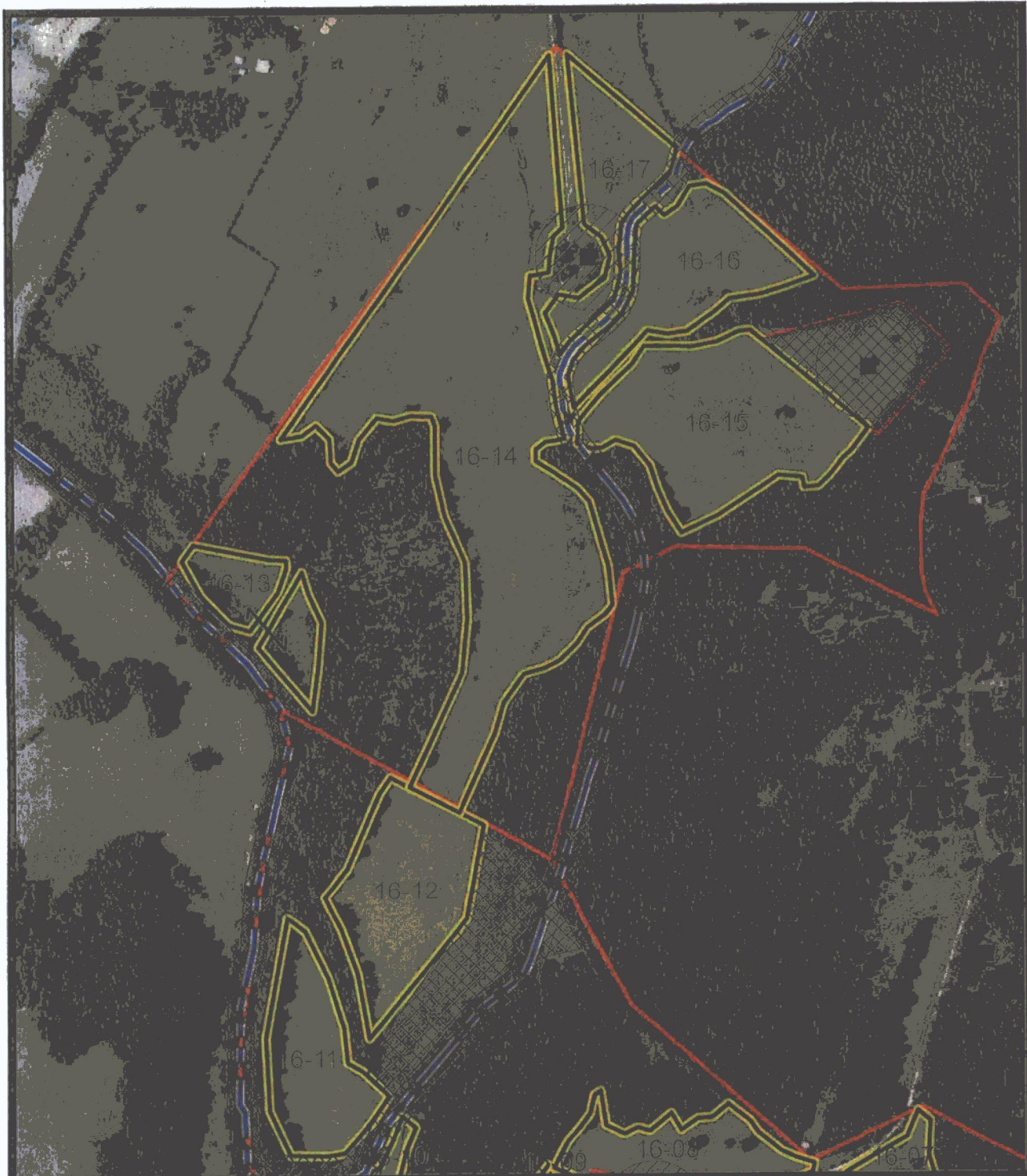
REVISED 11-6-2015





# SYNAGRO

JOHN FORD  
MA 16  
FIELDS 11-17



1 inch = 583 feet

1:7,000

**AERIAL MAP**

CREATED 10-9-2015



# SYNAGRO

JOHN FORD  
MA 16  
Fields 18-23



**AERIAL MAP**

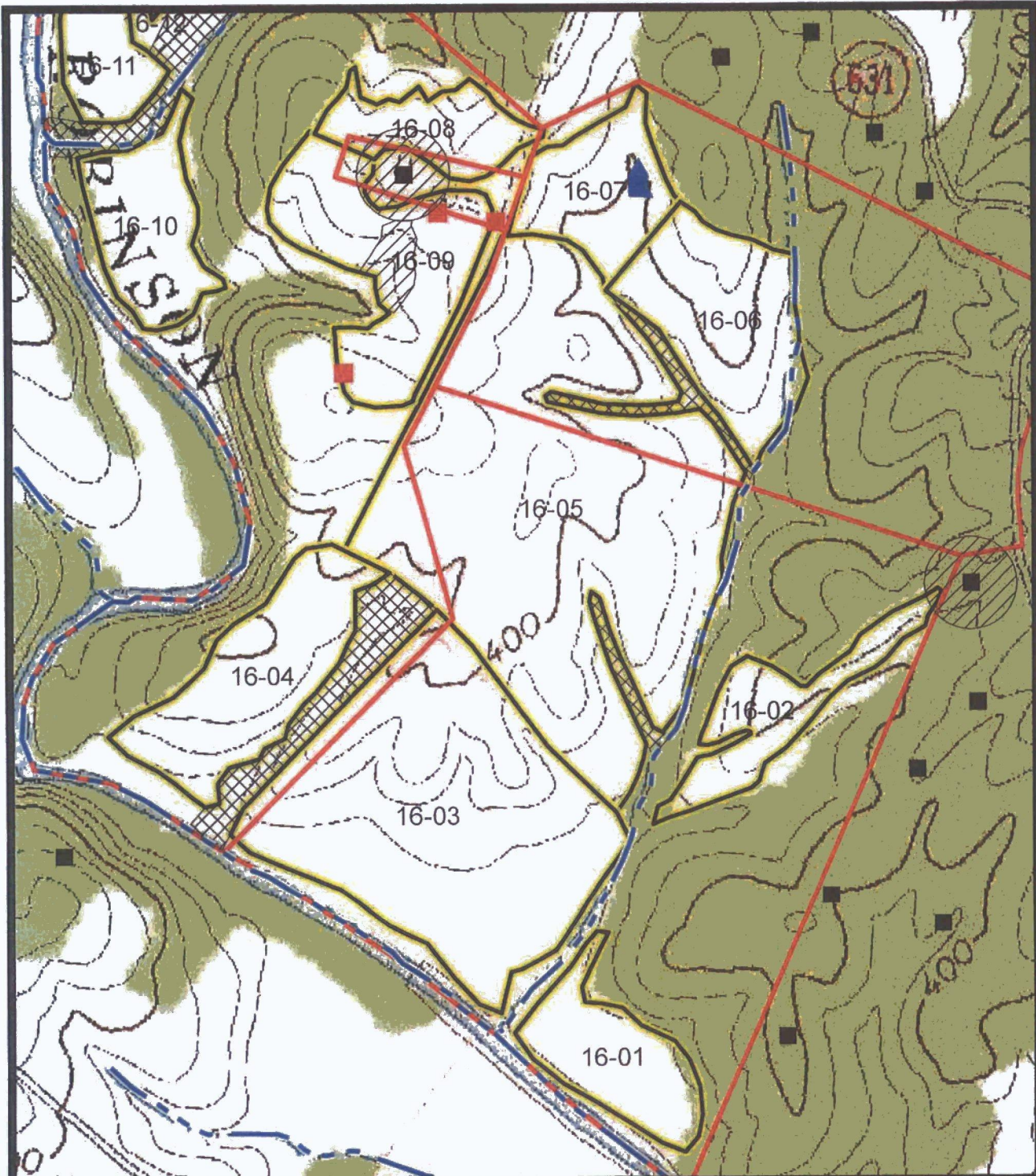
REVISED 1-19-2016





# SYNAGRO

JOHN FORD  
MA 16  
Fields 1-10



1 inch = 667 feet

1:8,000

FIELD	ACRES
16-01	7.9
16-02	6.9
16-03	34.5
16-04	12.5

## TOPO MAP

FIELD	ACRES
16-05	53.6
16-06	12.1
16-07	7.5

REVISED 11-6-2015

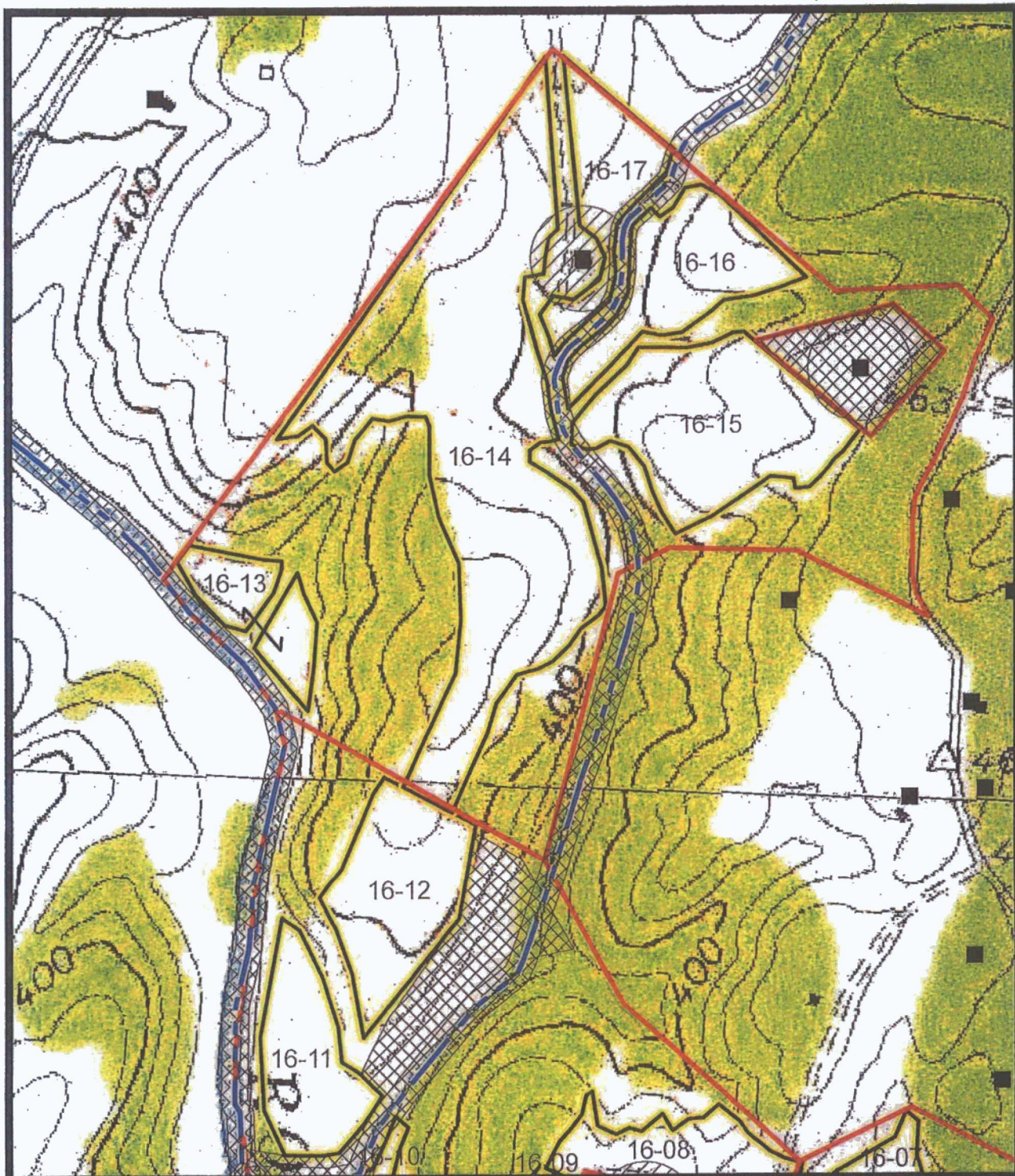
FIELD	ACRES
16-08	5.6
16-09	13.3
16-10	7.9





# SYNAGRO

JOHN FORD  
MA 16  
FIELDS 11-17



1 inch = 583 feet

1:7,000

FIELD	ACRES
16-11	5.7
16-12	7.8
16-13	3.5
16-14	20.8

## TOPO MAP

CREATED 10-9-2015

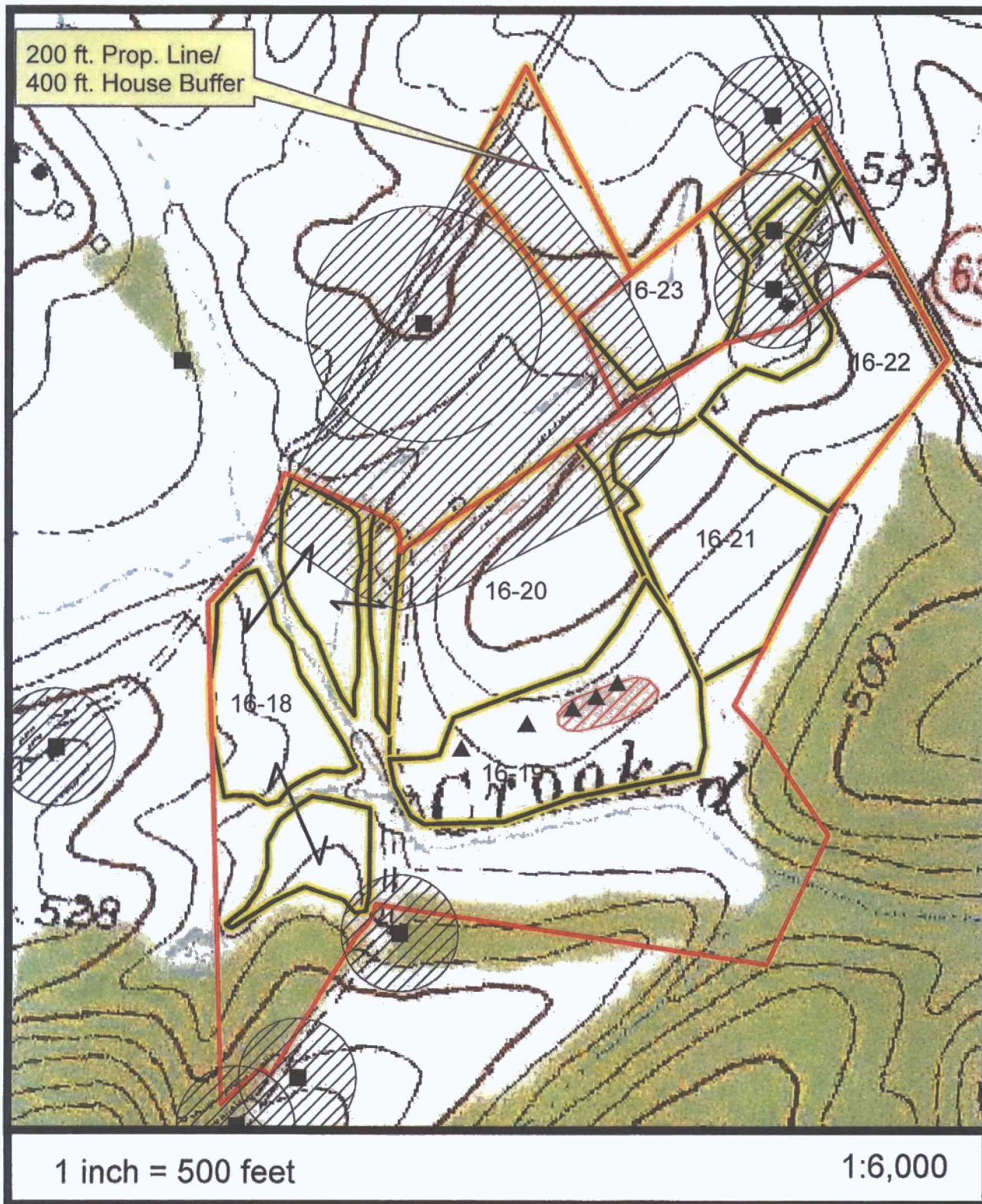
FIELD	ACRES
16-15	11.1
16-16	6.6
16-17	1.7





# SYNAGRO

JOHN FORD  
MA 16  
Fields 18-23



FIELD	ACRES	FIELD	ACRES
16-18	12	16-21	8.8
16-19	10.3	16-22	11.5
16-20	12.9	16-23	4.6

TOPO MAP

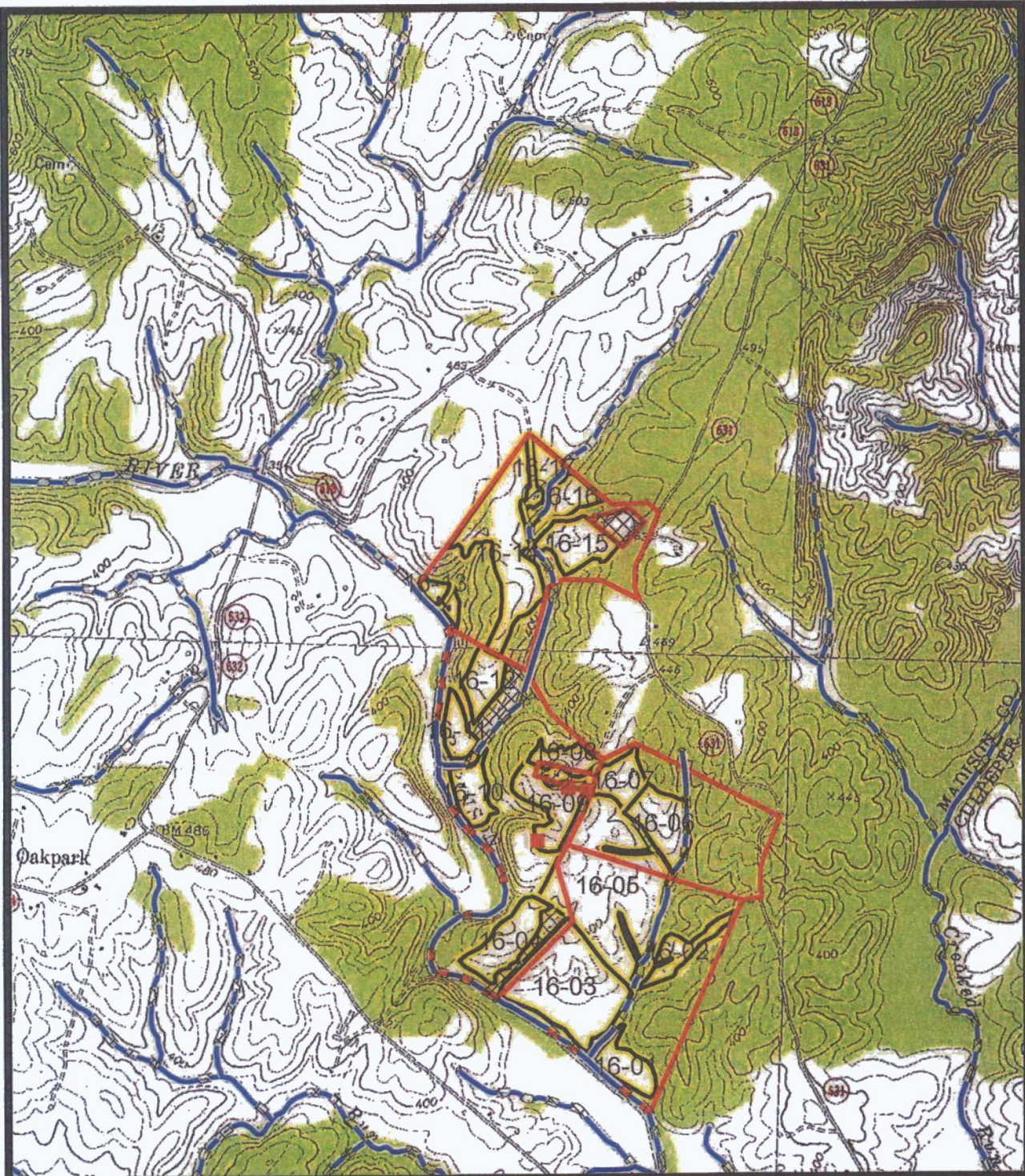
REVISED 1-19- 2016





# SYNAGRO

JOHN FORD  
MA 16  
FIELDS 1-17



1 inch = 2,000 feet

1:24,000

TOPO MAP

CREATED 10-9-2015





# SYNAGRO

JOHN FORD  
MA 16  
Fields 18-23



1 inch = 2,000 feet

1:24,000

TOPO MAP

REVISED 1-19-2016



